Byrd (Wm A.)

# EXTIRPATION OF RECTUM,

WITHOUT DESTROYING THE

## SPHINCTER ANI MUSCLE.

By WILLIAM A. BYRD, M.D.,

OF QUINCY, ILL.

# EXTIRPATION OF RECTUM,

## WITHOUT DESTROYING THE SPHINCTER ANI MUSCLE.

BY WILLIAM A. BYRD, M.D.,

OF QUINCY, ILL.



REPRINTED FROM THE "MEDICAL AND SURGICAL REPORTER," DECEMBER 11, 1880.

The operation of extirpation of the rectum, or a portion thereof, for carcinomatous disease, or for stricture from other growths, has been given an impetus by the work and writings of Volkmann, in Germany, who has been followed by Drs. H. O. Walker, A. Van Derveer, Wm. H. Van Buren and others in this country, and chiefly by Mr. Harrison Cripps in England.

That the operation is destined to be of great benefit in relieving suffering and prolonging life will hardly admit of a doubt, when proper cases for the operation have been selected, and the operation performed with proper precautions.

The proper conditions would, with our present light, be that the disease should be epithelial, not too extensive and the patient not too much worn down. To the above, some authors add, that it has not involved the peritoneum, and is limited to the walls of the intestine. Two conditions that I must consider unnecessary to rigorously exclude.

As to the proper mode of excision, great care must be taken to guard against hemorrhage, which will be terrific and likely fatal if the ordinary scissors or knife be used to make the operation with. I insist the more on this from hearing a report upon surgery by Dr. Wm. Hill, of Bloomington, in this state, to the Illinois State Medical Society, at its last meeting. When he came to excision of the rectum he gave a graphic description of two such operations he had witnessed a capable and distinguished surgeon perform, in each of which, just before the end of the operation, to use his own words as nearly as I can recollect them, "at this stage of the operation death stepped in and drew the curtain on the bloody drama."

That the operation, as generally performed, includes the extirpation of the sphincter, and to that extent causes great inconvenience to the patient and more or less disgust to those who are brought in the immediate vicinity of the patient, on account of his or her partial inability to retain the fæces, is undeniable, and that fact has influenced me, in my operations, to endeavor to preserve the muscle for future usefulness.

Before relating cases, it will be as well to consider the mode of getting at such growths, some course of manipulation that would be apt to be of use in the majority of cases requiring the operation. The first thing to be done is to thoroughly dilate the rectum, dilate until the sphincter's muscular fibres give way and part like the fibres of a green stick when fractured. When this is properly and efficiently done, the bowel can be turned down, like rolling back the cuff of a coat sleeve, and a goodly part of the mass brought external to the body, permitting easy manipulation. To any one who has not tried dilation to that extent, the operation may look dangerous and liable to cause lasting paralysis of the muscle, with as deplorable after results as would follow the extirpation of the muscle; but I will state that for twelve years I have been practicing it in all cases of internal hemorrhoids, fissure of anus, and fistula, that I have been called on to treat,

and find that the paralysis only lasts for a few days, just about long enough to permit free drainage and the passage of fæces without pain or irritation. After the dilatation the rectum is to be held open by assistants, with stout wire loops bent into the shape of Sims' specula.

It sometimes happens that during dilatation the morbid mass splits longitudinally, nearly, if not quite down to the underlying connective tissue; this fissure being generally located along the centre of the neoplasm, may be taken advantage of, and the growth removed by seizing the upper portion of each mass with forceps or double tenacula, and separating the neoplastic from the healthy tissue by passing the white-hot wire of a galvano-cautery along at the point of union of the two tissues, touching lightly, as with a scalpel in making a nice dissection. Thus, by working carefully downward and outward from the fissure, the neoplasm is removed with little hemorrhage and in a short time; especially is this true if the disease is limited to the tissues of the gut proper.

Unfortunately, the disease is not always limited by the connective tissue external to the bowel; then the proper amount of pressure cannot be brought to bear so well with a galvano-cautery as with Paquelin's thermo-cautery, with which the growth should be bisected, if it does not fissure from the force of dilatation, and the same process followed as described above; except where prolongations extend deeply in the tissues they should be followed up and destroyed with the point of the thermo-cautery, or scraped away with Sims' or Simon's sharp curette. The latter instruments are not so good to use as the actual cautery, on account of the greater hemorrhage.

As to a slight involvement of the peritoneum, I see no good reason—in the light that the number of successful cases of removal of the cervix uteri and morbid growths of the uterus, where that membrane has been opened without harm, although accidentally done, has shown us—why the operation should not be undertaken and successfully carried out. I, at least, do not think such a condition would deter me from giving the patient the benefit that I believe would so almost certainly follow the successful carrying out of the operation. In such a case it would be well to pass a drainage tube into the peritoneal cavity a short distance, and unite the edges of the peritoneal wound, except where the tube entered, carefully, with sutures of cat-gut, metallic or Dr. Pancoast's black silk. Sutures I have never used, believing that they would defeat one of the objects of thorough dilatation.

Upon this point I find Dr. A. Van Derveer, of Albany, N. Y., fully agrees with me, and, in regard to that I will quote from a very good article written by him for Vol. xvi, 1879, New York *Medical Record*, entitled "Report of Two Cases of Excision of the Rectum, with Remarks." He says:—

"I think there is much yet to be considered regarding the use of sutures. The principal causes of death in this operation have been pyæmia, pelvic cellulitis, and peritonitis. With this knowledge in our possession, is it not safe to do away entirely with sutures, give free exit to the wound by the aid of a drainage-tube and frequent washing out, keeping the parts in an antiseptic condition, and avoid the possible danger there is in the sutures, closing the parts in such a manner as to cause the pus to be retained, and thus most certainly produce some of the results that are known to be fatal? I should like a fair, candid expression from the surgeons who have done this operation, as to how much service the sutures have been in holding the rectum down to the cutaneous surface, and whether, in the majority of cases, they have not torn out before primary union could possibly occur." The whole article will well repay perusal, as will also a lecture by Dr. W. H. Van Buren, in Vol. xiv, 1878, of the New York *Medical Record*, entitled, "Extirpatio Recti (Volkmann) for Cancer, with Cases." Dr. Van Buren's lecture treats the subject more methodically, of course, than I expect to in this short paper, or by Dr. Van Derveer, in his report.

After the operation it is well to evenly pack the wounded surface with something that will prevent hemorrhage by giving even, steady support. Some surgeons use a large sponge passed up above the incisions and pack the space below with smaller sponges. This plan I have tried, but a better plan would be to use the folds of a roller bandage made of cheese cloth, and thoroughly soaked in glycerine; this should be packed, as it is unrolled, around a rubber catheter passed well up the bowel; the end hanging out at the anus permits its ready removal.

The catheter should not be omitted, as it permits the free passage of gases as they are generated.

The bandage tampon I first used in operations upon the uterus, and was so well pleased with the facility of its application and removal that I now use it for tamping in all cavities where a tampon is needed. The saturating of the tampon with glycerine should not be omitted, as it acts as an antiseptic; also prevents undue

swelling of the parts from the flow of the fluids from the surrounding tissues, owing to its affinity for water. Its antiseptic qualities any one in general practice can soon prove by using a vaginal tampon, either dry or moistened with water, and one saturated with glycerine; if the two first are taken out at the expiration of twelve hours, they will be found very offensive; the one saturated with glycerine at the end of that time will give out no odor, and at the end of forty-eight hours will be scarcely as offensive as those not so treated are in twelve hours.

The tampon should be removed in about twelve hours, as by that time there will have been sufficient plasma thrown out in the tissues to check any tendency to hemorrhage.

Dr. Van Buren recommends that the tampon be made with a soft, easily distensible, India-rubber bag, working on the same principle as a Barnes' dilator, having a catheter or tube passing through it to the cavity of the bowel, to permit the escape of gas. This will not act as well as the folded bandage and glycerine, as it will prevent the escape of fluids that readily become septic and prevents any means being used against their decomposition, which is met by the glycerine in the other method.

Of course, there are other means of extirpation, such as the ecraseur, and serrated scissors, but the actual cautery is so superior that they should not be considered if it is at all possible for the surgeon to avail himself of the means of applying the actual cautery.

I stated, in the beginning, the benefits to be derived from this operation would not admit of a doubt, which statement, perhaps, had better be modified to read, by the majority of surgeons. So judicious a surgeon and able a teacher as Dr. John Ashhurst, Jr., in the second edition of his "Principles and Practice of Surgery," page 818, in writing of malignant stricture of the rectum, writes: "The treatment must be merely palliative; any attempt to excise or tear away the malignant growth being, in my judgment, totally unjustifiable, and usually leading to a speedy death from peritonitis or hemorrhage. Pain is to be alleviated by the free use of anodynes, by suppository or otherwise, and fecal accumulation to be prevented by the occasional use of laxatives. Emollient enemata may sometimes afford relief, but great care must be taken in their employment, not to inflict injury on the bowel. Bougies may be cautiously employed before ulceration has begun, but at a later period could only be productive of mischief. Linear rectotomy is recommended by Verneuil, but I confess it seems to me not a very promising mode of treatment, and I must say the same of Volkmann's proposal to remove the growth with a circular portion of the rectum and stitch together the divided portions of the bowel. Finally, lumbar colotomy may be properly resorted to, either to relieve obstruction or to obviate the suffering caused by the passage of fæces over the ulcerated surface."

But to illustrate the advantages, I will report two cases; the first of which was published in an article of mine entitled "Clinical Notes upon the Use of the Galvano-cautery," in the *Independent Practitioner*, of Baltimore, for January, 1880.

Case 1.—"Mrs. Philip B., aged sixty-one, was sent to me by Dr. S. W. Durant, of Adams, Illinois, to have an operation performed to give her relief from pain, loss of blood and tenesmus during defecation. I sent her to St. Mary's Hospital. An examination revealed, an inch and a half up the rectum, an indurated, nodulated mass, of half an inch or more in thickness, occupying the bowel and infiltrated in its coats for two inches. The opening through this mass would barely admit the passage, with some force, of the index finger, and was ulcerated throughout. From the ulcerated surfaces came a good deal of pus and blood when hardened fæces were forced through the small opening. Dr. Durant was of the opinion that the stricture was of a malignant nature.

"I determined to remove the strictured portion of the bowel with the curette and the caustic wire, through dilating the sphincters, thereby saving those muscles for future use.

"February 25th, 1879, with the assistance of Drs. J. F. Durant, M. Rooney, M. Penick and J. A. Wagner, with the patient under ether, I introduced my hand, as a divulsor, into the rectum and through the stricture. The rectum was then held open with wire-loop specula, while I scraped the softest portions of the growth with a Sims' sharp uterine curette. The hard nodules were lifted with forceps and held terse while the heated wire was thrown around and cut through below their bases. All points where blood issued were well cauterized. There was great hemorrhage while using the curette.

"Warm injections of a solution of chloride of potassa were ordered every four hours, as an antiseptic. Anodynes were given as necessary, though she required but little, and tonics.

"Large-sized rectal bougies were passed daily, after the first week, to prevent the cicatrix from contracting so as to reproduce a stricture.

"March 25th, there being no ulceration nor discharge of pus or blood, or tenesmus, she was discharged. The cicatricial tissue that occupied the place of the tumor was not more than half an inch wide, was smooth, elastic, and had an opening through it of an inch and a half diameter.

"The tissues of the constricting mass were carefully examined under the microscope, but no evidence of malignancy was discovered.

"May 23d, she returned, complaining of difficulty in passing fæces if hardened, but free from hemorrhage or suppuration. The cicatricial tissue had contracted, leaving the calibre of the bowel not more than three-quarters of an inch in diameter. This, with the assistance of Dr. S. W. Durant, I dilated, under ether, with my hand, and ordered it to be kept open by the daily use of Wales' soft rubber dilators.

"August 1st, she returned, with constipation and trouble higher up the bowel, beyond my reach. With laxatives and tonics she improved, and is doing fairly well now; yet I believe that although we were unable to determine carcinoma, that disease is the trouble, and that she will yet die of it."

She only suffered pain preceding efforts to evacuate the bowels, that would come on about every three days, and that was obviated to great extent by the use of the fluid extract of cascara sagrada. She required but little morphia to allay the pain.

She died in August, 1880, having been fairly comfortable up to within a few weeks of her death, when she died of exhaustion, and presumable amyloid degeneration of the kidneys, from the long continued suppuration.

This case might be cited by the opponents of the operation as proving the inutility of it, but it must be remembered that she lived for a year and a half after the operation, in a state of comparative comfort, being able to attend to her domestic duties most of the time.

It may be possible that a localized pelvic peritonitis existed, causing adhesions or bands of false membrane to obstruct a portion of the small intestine, a surmise justified by the fact that the smaller size of Hale's dilators could be passed into the colon for eighteen inches. As she died out of the city I was unable to make an autopsy.

Case 2.—March 24th, 1880, I was called by Dr. A. L. Fox-Rooney, to see Mrs. T. P., a lady of fine physique, aged forty-three, who had been suffering with what she supposed to be hemorrhoids, for over a year. Upon examination a nodulated, warty-like mass was found, one inch from the anus, occupying about three-fourths of the calibre of the rectum, posteriorly and laterally. This had been diagnosed by the Doctor to be epithelioma, in which I agreed with him and advised extirpation. The next day the operation was performed, with the assistance of Drs. A. L. Fox-Rooney and Michael Rooney. The sphincters were first fully dilated and the mass removed as described above, with the galvanocautery. There was considerable hemorrhage, which was stopped with the cautery and a tampon applied. After the tampon was removed antiseptic injections were used, of a warm saturated solution of chlorate of potassa, an agent I consider far superior to carbolic acid in operations upon the lower bowels, on account of its freedom from danger through absorption.

The microscope revealed the fact that the growth was epithelioma.

Under the careful and judicious treatment of Dr. Fox-Rooney the lady made a rapid recovery and has had no indications of a return of the disease up to the present time, and I believe I may truly say that she is cured.

In neither of these cases were any sutures, nor any other means to obtain union by first intention used, as I believe with Dr. Van Derveer, as above, and with Dr. W. W. Dawson, of Cincinnati, who teaches that patients recover better after operations for epithelioma by allowing free suppuration from the surface from whence the growth is removed.

If I have contributed in the least in establishing this operation upon a scientific basis, or the stimulating of abler surgeons to do so, I shall feel abundantly repaid for the time spent in preparing this article.

407 *Jersey st.*, *Quincy*, *Illinois*, *Nov.* 22, 1880.